REMARKS

The Office Action mailed January 25, 2006 considered claims 1-27. Claims 1-4, 9, 13, 16, 19, 23, 25 and 26 were rejected under 35 U.S.C. 102(b) as being anticipated by Short ("Building XML Web Services for the Microsoft®.NET Platform" published by Microsoft Press). Claims 5 and 7 were rejected under 35 U.S.C. 103(a) as being unpatentable over Short in view of Pabla et al (U.S. Patent Publ. No. 2004/0162871). Claim 6 was rejected under 35 U.S.C. 103(a) as being unpatentable over Short in view of Pabla and further in view of Tan (U.S. Patent Publ. No. 2003/0233360). Claim 8 was rejected under 35 U.S.C. 103(a) as being unpatentable over Short in view of Pabla and further in view of Frankel et al. (U.S. Patent No. 5,392,448). Claims 10, 11, 20 and 21 were rejected under 35 U.S.C. 103(a) as being unpatentable over Short in view of Tan. Claim 12 was rejected under 35 U.S.C. 103(a) as being unpatentable over Short in view of Matsushima (U.S. Patent Publ. No. 2004/0267808). Claims 14, 15 and 24 were rejected under 35 U.S.C. 103(a) as being unpatentable over Short in view of Myllymaki et al. (U.S. Patent Publ. No. 2004/0088713). Claim 17, 18 and 27 were rejected under 35 U.S.C. 103(a) as being unpatentable over Short in view of Haswell et al. (U.S. Patent Publ. No. 2005/0193269). Claim 22 was rejected under 35 U.S.C. 103(a) as being unpatentable over Short in view of Frankel.[1]

By this paper, claims 1, 3, 9, 12, 17, 19, 20, 22, 24 and 25 have been amended, claim 28 added, and no claims have been cancelled.[2] Accordingly, following this paper, claims 1-28 are pending, of which claims 1, 9 and 19 are the only independent claims at issue.

Initially, it will be noted that various amendments have been made to the claims merely to correct minor typographical informalities and to promote consistency and clarity among the language of the various claims. In particular, amendments to various dependent claims (claims 3, 12, 17, 20, 22, 24 and 25) have been made to clarify the respective claim and not for any reason related to patentability. In addition, the formatting of each of the independent claims (claims 1, 9 and 19) has been amended to more clearly recite the various claim elements.

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[1] Although the prior art status of the cited art is not being challenged at this time, Applicant reserve the right to challenge the prior art status of the cited art at any appropriate time, should it arise. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status of the cited art.

[2] Support for the claim amendments and new claims can be found throughout the disclosure, including at least the teachings in paragraphs [0002], [0024], [0028] and [0030] of the originally filed application.

As clarified by the claims, the present invention is generally directed to computer-readable media and Web services for allowing a client on a computer network to access and obtain results from a database on the network. As recited in claim 1, for example, computer-executable instructions cause a client to receive a description document from the server. The description document includes class definitions for a generic object class and for a generic service class, as well as a plurality of object type classes derived from the generic object class and which each correspond to a type of object in the database. In addition, the description document includes a plurality of database operation methods defined for the generic object class and derived from the generic service class, as well as at least one flag statement identifying an object type. The client further generates a database access request message for performing a database operation on a selected object type by determining whether the selected object type is the type identified in the flag statement. If it is, an object of the selected object type is created using the class definition for the selected object type in the received description document and the created object is serialized and included in a request message.

Claim 9 recites computer-readable media having computer-executable instructions which generally correspond claim 1, but is recited from the server perspective, and further includes deserializing serialized objects. Claim 19 is directed to a Web service and generally corresponds to claim 9, but is recited in functional (means for) language.

While the Short reference generally relates to building XML Web services for the Microsoft .NET runtime platform, and teaches many things in that regard, it fails to teach or suggest all of the limitations of the independent claims. For example, among other things, Brown fails to tech or suggest wherein a description document includes class definitions for a generic object class and for a service class, and wherein a plurality of database operation methods are defined in the description document which are derived from the service class, as recited in combination with the other recited claim elements.

In particular, Short teaches various Web methods that may be used by, and exposed to, a Web service. For instance, Short teaches that a Calculator Web service may include XML schema allowing a user to make a request and receive a response. (Ch. 5, ll. 8-10). The schema may include, for example, an *Add* and a *Subtract* method, each of which accept two integers

from the client and return a single integer to the client which is representative of the result. (Ch. 6, ll. 5-7).

Short further describes a Web method that accepts a purchase order of a *PurchaseOrder* object class defined in XML schema. (Ch. 7, § 2; § 6, ll. 1-3). Under one approach, Short teaches defining a Web method that is decorated with various attributes and parameters (including *SoapDocumentMethod* and *XMLElement*), and which further details the implementation of the Web method. (Ch. 7, § 6, ll. 1-3; 8-16). Significantly, however, the Web method does not define any class, and particularly not a service class. (*See* Ch. 7, § 6, ll. 10-16). As an alternative to the first approach, Short also describes a second approach. In the second approach, attributes decorate an object class. (Ch. 7, § 6, ll. 19-28).

Accordingly, while Short teaches that various methods may be defined, it fails to teach or suggest database operation methods as recited in the above claims. For example, Short fails to teach wherein a *service class* is defined in a description document that is received by a client from a server, or a plurality of database operation methods *derived from the service class*, as recited in combination with the other claim elements. Instead, Short teaches an operation of accepting a *PurchaseOrder* object class by: (i) defining a Web method, but without any class definitions or derivation from a service class; or (ii) attaching attributes to an *object* class. Moreover, Short's teachings for the Calculator Web service fail to teach or suggest defining a service class, let alone deriving a plurality of database operation methods from the service class. Moreover, the *Add* and *Subtract* operations further operate on client-input data, and fail to operate on a database as recited in combination with the other claim elements.

For at least the foregoing reasons, all of the other rejections and assertions of record with respect to the independent and dependent claims are now moot, and therefore need not be addressed individually. However, in this regard, it should be appreciated that Applicant do not necessarily acquiesce to any assertions in the Office Action that are not specifically addressed above, and hereby reserve the right to challenge those assertions at any appropriate time in the future, should the need arise, including any official notice.

Although it is not necessary, Applicant will, by way of example and not limitation, also point out a few additional distinguishing features of the present invention, which are found in various dependent claims. In particular, it will be noted that the cited art does not appear to teach or suggest
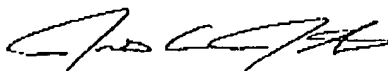
wherein receiving a description document from the server for describing a service includes the client converting the description into a compiled software format (claim 3), or where the compiled software format is an intermediate language for a computer runtime environment (claim 4). In particular, Short teaches that a Web service is contained in an .asmx file, and that when the Web service is accessed, it is compiled by a .NET runtime. (Ch. 6, § 1, ll. 31-33). Accordingly, the *service is compiled by the server*, and fails to teach or suggest an embodiment wherein the *description document describing* the service is compiled *by the client*.[3]

In addition, the cited art fails to teach or suggest wherein the plurality of database operations includes one or more batch operations (claim 28). In fact, and as previously noted, Short actually appears to disclose only one database operation (i.e. accepting a purchase order), and fails to teach or suggest wherein multiple purchase orders can be accepted as a batch.

For at least the foregoing reasons, Applicant respectfully submit that the pending claims are neither anticipated by nor made obvious by the art of record. In the event that the Examiner finds and remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

Dated this 25 day of April, 2006.

Respectfully submitted,

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PPA060000319.3V001

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[3] Moreover, Short appears to teach that a program database may be generated by a compiler to map between intermediate instructions and source code. (Ch. 11, § 2, ll. 15-19). Notably, the debugging is performed on the Web *service* itself, rather than on a description *document describing the service*, as claimed. Moreover, passage cited in the Office Action recites a program database which is generated by the compiler, rather than the description document as claimed in combination with the other recited elements.